(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 17 March 2005 (17.03.2005)

PCT

(10) International Publication Number WO 2005/024408 A1

(51) International Patent Classification7: G01N 27/26, 27/447

TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/US2004/021740

(22) International Filing Date: 8 July 2004 (08.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/496,673

21 August 2003 (21.08.2003)

(71) Applicant (for all designated States except US): COL-ORADO STATE UNIVERSITY RESEARCH FOUN-DATION [US/US]; PO BOX 483, Fort Collins, CO 80522 (US).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): HENRY, Charles, S. [US/US]; 7221 Trout Ct., Fort Collins, CO 80526 (US). GARCIA, Carlos, D. [AR/US]; 500 W. Prospect, Apt. 27K, Fort Collins, CO 80523 (US).
- (74) Agent: JAGTIANI, Ajay; 10363-A Democracy Lane, Fairfax, VA 22030 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GO,

Declarations under Rule 4.17:

GW, ML, MR, NE, SN, TD, TG).

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ. TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DIRECT DETERMINATION OF CARBOHYDRATES, AMINO ACIDS AND ANTIBIOTICS BY MICROCHIP ELECTROPHORESIS WITH PULSED AMPEROMETRIC DETECTION

(57) Abstract: The present invention provides a microchip for performing electrophoresis with pulsed amperometric detection (PAD) for the separation and detection of underivatized carbohydrates, amino acids, sulfur-containing antibiotics, etc. PAD allows for the direct detection of amines, thiols, alcohols and carbohydrates and therefore is a useful technique for the development of electrochemical detection for microchip electrophoresis.

